

IN THE CLAIMS:

Please amend claims 1-5, 7 and 8 and add new claims 9-15 as follows. The following listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method for developing a family of complex systems having a common software architecture platform, the method comprising:

~~set up of forming~~ a functional requirements specification (FRS) which includes use cases that ~~describes~~ describe interaction of users with said complex systems in terms of abstract concepts,

~~set up of forming~~ a requirements object model which explains the abstract concepts in terms of a structured vocabulary,

wherein

developing the use cases ~~are developed hand-in-hand simultaneously~~ with the formation of the requirements object model, and

amending the requirements object model while the use cases are being developed, the requirements object model being completed once all of the use cases have been developed.

2. (Currently Amended) A method as claimed in Claim 1,  
wherein the functional requirements specification (FRS) includes  
one or more chapters, further comprising: and

establishing one or more FRS authoring teams ~~are established~~

5 for separate chapters,

designating a single object model control team to control  
internal consistency of the requirement object model,

forming one or more overlapping modeling teams ~~are formed~~  
where each modeling team includes members of the object model

10 control team together with one or more members of respective FRS  
authoring teams, and

~~which~~ providing that overlapping modeling teams for their  
chapters construct use cases and provide respective portions of  
the structured vocabulary.

3. (Currently Amended) A method as claimed in Claim 1,  
wherein differences between members of the family are expressed  
in the requirements object model ~~, notably using one or more of~~  
~~the following mechanisms:~~

5 ~~— Different members of the family using different subclasses of~~  
~~a generalised class,~~

~~Different members of the family using different multiplicities  
in relationships between classes,~~

~~Different members of the family using different values for an  
attribute of a class.~~

4. (Currently Amended) A method as claimed in Claim 2,  
~~wherein~~ further comprising:

constructing an initial model in at least one of the  
modeling teams, ~~an initial model is constructed and~~

performing the FRS authoring of the use cases ~~is performed~~  
on the basis of the initial model, and

performing fine tuning of the use cases ~~is performed~~ by the  
object model control team.

5. (Currently Amended) A method as claimed in Claim 2,  
~~wherein~~ further comprising carrying out FRS authoring of the use  
cases of several chapters ~~is carried out~~ in parallel by the  
respective FRS authoring teams.

6. (Original) A method as claimed in Claim 1, wherein the  
complex systems are medical diagnostic imaging systems, notably,  
diagnostic x-ray examination systems.

7. (Currently Amended) A family of complex systems, notably a family of medical imaging systems, obtained by the method of claim 1, wherein separate complex systems supporting support respective, different subsets of the use cases.

8. (Currently Amended) A method as claimed in Claim [[1a]] 1, where the precise ~~behaviour~~ behavior of one or more use cases differs among members of the family according to variations expressed in the object model, notably by different subclasses of a general class, by different multiplicities of relationships, or by different values of attributes.

9. (New) A method as claimed in Claim 1, further comprising the step of expressing differences between members of the family in the requirements object model using at least one of the following mechanisms:

different members of the family are expressed using different subclasses of a generalized class,

different members of the family are expressed using different multiplicities in relationships between classes, and

different members of the family are expressed using

different values for an attribute of a class.

10. (New) A method as claimed in Claim 1, further comprising authoring a draft version of the use cases prior to the initial formation of the requirements object model.

11. (New) A method as claimed in Claim 1, further comprising analyzing the requirements object model to identify difficulties and shortcomings, the requirements object model being amended in light of the identified difficulties and

5 shortcomings.

12. (New) A method as claimed in Claim 1, further comprising expressing the use cases in the terminology of the requirement object model.

13. (New) A method as claimed in Claim 1, further comprising considering the functional requirements specification complete when all of the use cases are expressed in the terminology defined by the requirements object model.

14. (New) A method as claimed in Claim 1, wherein since the use cases are developed simultaneous with the formation of the requirements object model, the requirements object model is thereby formed during the formation of the functional

5 requirements specification.

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15. (New) A method as claimed in Claim 1, wherein the requirements object model is amended in consideration of analysis of the use cases.